WHAT IS CLAIMED IS:

1. A composition comprising calcined kaolin, the calcined kaolin having a particle size distribution wherein:

$$\frac{\text{(particle size at a cumulative mass of } < 80\%)}{\text{(particle size at a cumulative mass of } < 20\%)} \leq 3;$$

further wherein the calcined kaolin has a median particle size ranging from at least about 1 μm to about 3 μm; and

the total of alkali and alkaline earth metals present in the composition is less than or equal to about 1.0% by weight, relative to the total weight of the composition.

2. The composition according to claim 1, wherein the calcined kaolin is produced from a hydrous kaolin having a particle size distribution, wherein:

$$\frac{\text{(particle size at a cumulative mass of } < 80\%)}{\text{(particle size at a cumulative mass of } < 40\%)} \leq 3.5.$$

3. The composition according to claim 2, wherein the hydrous kaolin has a median particle size ranging from at least about 0.5 μm to about 2 μm.

4. The composition according to claim 2, wherein the hydrous kaolin has a shape factor of at least about 10.

5. The composition according to claim 1, wherein the total amount of alkali and alkaline earth metals present in the composition is less than or equal to about 0.5% by weight, relative to the total weight of the composition.

6. The composition according to claim 1, wherein the composition has an oil absorption of at least about 100%.

7. The composition according to claim 6, wherein the composition has an oil absorption of at least about 110%.

8. The composition according to claim 1, wherein the calcined kaolin comprises mullite.

9. The composition according to claim 8, wherein the mullite is present in the composition in an amount of at least about 2% by weight, relative to the total weight of the composition.

10. The composition according to claim 9, wherein the mullite is present in the composition in an amount of at least about 5% by weight, relative to the total weight of the composition.

11. The composition according to claim 10, wherein the mullite is present in the composition in an amount of at least about 8% by weight, relative to the total weight of the composition.

12. The composition according to claim 1, wherein the calcined kaolin comprises metakaolin.

13. A paint comprising the composition according to claim 1.

14. A polymer comprising the composition according to claim 1.

15. A cable sheathing comprising the composition according to claim 1.

16. A rubber comprising the composition according to claim 1.

17. A feed for a ceramic comprising the composition according to claim 1.

18. A ceramic for supporting a catalyst, the ceramic being obtained from the feed according to claim 17.

19. A catalyst comprising a ceramic, the ceramic being obtained from the feed according to claim 17.

20. A composition for catalytic cracking according to claim 1.

21. A paper coating composition comprising a calcined kaolin according to claim 1.

22. A method of making a coated paper comprising:

coating a fibrous substrate with slurry, the slurry comprising a composition according to claim 1.

23. A method of preparing a calcined kaolin comprising:

(a) providing a hydrous kaolin having a particle size distribution, wherein:

$$\frac{(\text{particle size at a cumulative mass of } < 80\%)}{(\text{particle size at a cumulative mass of } < 40\%)} \leq 3.5;$$

(b) heating the hydrous kaolin to at least one temperature ranging from about 500°C to about 1200°C for a time sufficient to at least partially dehydroxylate the hydrous kaolin; and

(c) forming a composition comprising calcined kaolin having a particle size distribution, wherein

$$\frac{(\text{particle size at a cumulative mass of } < 80\%)}{(\text{particle size at a cumulative mass of } < 20\%)} \leq 3.$$

24. The method according to claim 23, wherein the hydrous kaolin in (a) has a median particle size ranging from at least about 0.5 μm to about 2 μm.

25. The method according to claim 23, wherein the total of alkali and alkaline earth metals present in the composition comprising calcined kaolin in (c) is less than or equal to about 1.0% by weight, relative to the total weight of the composition.

26. The method according to claim 23, wherein the hydrous kaolin is subjected to at least one beneficiation process prior to (b).

27. The method according to claim 26, wherein the at least one beneficiation process is chosen from froth flotation, magnetic separation, selective flocculation, and leaching.

28. The method according to claim 23, wherein the heating in (b) occurs for a time sufficient to fully dehydroxylate the hydrous kaolin.

29. The method according to claim 23, wherein the heating in (b) comprises flash calcining.

30. The method according to claim 23, wherein the composition in (c) comprises fully calcined kaolin.

31. The method according to claim 30, wherein the fully calcined kaolin comprises mullite.

32. The method according to claim 31, wherein the mullite is present in the composition in an amount of at least about 2% by weight, relative to the total weight of the composition.

33. The method according to claim 32, wherein the mullite is present in the composition in an amount of at least about 5% by weight, relative to the total weight of the composition.

34. The method according to claim 33, wherein the mullite is present in the composition in an amount of at least about 8% by weight, relative to the total weight of the composition.

35. The method according to claim 23, wherein the composition in (c) comprises metakaolin.

36. The method according to claim 23, wherein the composition comprising the calcined kaolin in (c) has a median particle size ranging from at least about 1 μm to about 3 μm.

37. A composition comprising calcined kaolin, the calcined kaolin having a particle size distribution wherein:

$$\frac{(\text{particle size at a cumulative mass of } < 80\%)}{(\text{particle size at a cumulative mass of } < 20\%)} \leq 3\text{; and}$$

further wherein the composition is formed from a hydrous kaolin obtained from the Rio Capim area of Brazil.

38. The composition according to claim 37, wherein the hydrous kaolin has a median particle size ranging from at least about 0.5 μm to about 2 μm.

39. A method of preparing a calcined kaolin comprising:

(a) providing a hydrous kaolin having a particle size distribution, wherein:

$$\frac{(\text{particle size at a cumulative mass of } < 80\%)}{(\text{particle size at a cumulative mass of } < 40\%)} \leq 3.5\text{; and}$$

(b) heating the hydrous kaolin to at least one temperature ranging from about 500°C to about 1200°C for a time sufficient to at least partially dehydroxylate the hydrous kaolin;

wherein the hydrous kaolin is obtained from the Rio Capim area of Brazil.

40. The composition according to claim 39, wherein the hydrous kaolin has a median particle size ranging from at least about 0.5 μm to about 2 μm.

41. A composition comprising calcined kaolin, the calcined kaolin having a particle size distribution wherein:

$$\frac{(\text{particle size at a cumulative mass of } < 80\%)}{(\text{particle size at a cumulative mass of } < 20\%)} \leq 3;$$

further wherein the total of alkali and alkaline earth metals present in the composition is less than or equal to about 1.0% by weight, relative to the total weight of the composition;

further wherein the calcined kaolin is formed from a hydrous kaolin; and

the calcined kaolin being refined in the absence of a defining step.

42. A method of preparing a calcined kaolin comprising:

(a) providing a hydrous kaolin having a particle size distribution, wherein:

$$\frac{(\text{particle size at a cumulative mass of } < 80\%)}{(\text{particle size at a cumulative mass of } < 40\%)} \leq 3.5;$$

(b) heating the hydrous kaolin to at least one temperature ranging from about 500°C to about 1200°C for a time sufficient to at least partially dehydroxylate the hydrous kaolin; and

(c) forming a composition comprising a calcined kaolin;

wherein the composition is refined without a defining step.

43. The composition according to claim 42, wherein the hydrous kaolin in (a) has a shape factor of at least about 10.

44. A composition comprising calcined kaolin, the calcined kaolin having a particle size distribution wherein:

$$\frac{(\text{particle size at a cumulative mass of } < 80\%)}{(\text{particle size at a cumulative mass of } < 20\%)} \leq 3$$

further wherein the composition has a median particle size of at least about 1 μm; and

the composition has an oil absorption of at least about 100%.

45. The composition according to claim 44, wherein the composition has an oil absorption of at least about 110%.